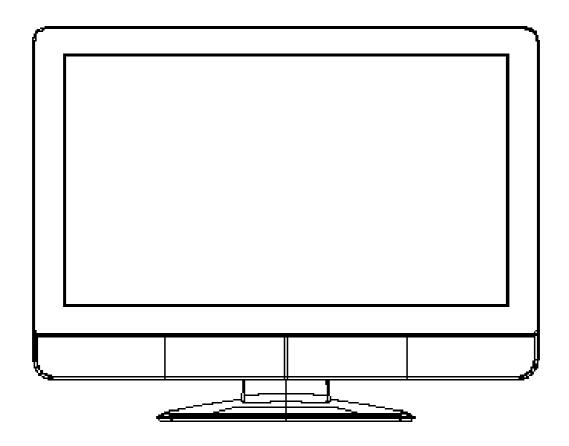
Service Manual



Model #: VO370M_LGD _LC370WUE-SBA1-6R1 (T37USVZB1RF-.VO370M1)

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FCC INFORMATION

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause unacceptable interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures -- reorient or relocate the receiving antenna; increase the separation between equipment and receiver; or connect the into an outlet on a circuit different from that to which the receiver is connected.

FCC WARNING

To assure continued FCC compliance, the user must use a grounded power supply cord and the provided shielded video interface cable with bonded ferrite cores. Also, any unauthorized changes or modifications to Amtrak products will void the user's authority to operate this device. Thus VINC Will not be held responsible for the product and its safety.

CE CERTIFICATION

This device complies with the requirements of the EEC directive 89/336/EEC with regard to "Electromagnetic compatibility."

SAFETY CAUTION

Use a power cable that is properly grounded. Always use the AC cords as follows – USA (UL); Canada (CSA); Germany (VDE); Switzerland (SEV); Britain (BASEC/BS); Japan (Electric Appliance Control Act); or an AC cord that meets the local safety standards.

Chapter 1 Features

- 1. Built in TV channel selector for TV viewing.
- 2. Color Depth 8 bit (D).
- 3. Connectable to PC's analog RGB port.
- 4. Built in S-video, HDTV, composite video, HDMI and TV out.
- 5. Built in auto adjust function for automatic adjustment of screen display.
- 6. Smoothing function enables display of smooth texts and graphics even if image with resolution lower than 1920(H) x1080 (V) is magnified.
- 7. Power saving to reduce consumption power too less than 0.5W.
- 8. On Screen Display: user can define display mode (i.e. color, brightness, contrast, sharpness, and backlight), sound setting, TV channel program, aspect and gamma or reset all setting.

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Chapter 2 Specification

1. General Description

Model No. VO370M

Product Name VIZIO VO370M

Panel RAKEN LC370WUE_SBA1

8 bit(D)

Display Pixels 1920 (H) x 1080 (V) pixels

Active Display Area (mm) 819.36 (H) x 460.89 (V)

Aspect Ratio 16:9 **Color Depth**

Luminance of White (cd/m²) LC370WUE SBA1

(Typical, Panel Spec.) **Contrast Ratio** LC370WUE SBA1 1400:1

TV system NTSC/ATSC/QAM

PC Inputs 15pins D-Sub

Video Inputs 1x RF (Combo, F Connector for internal NTSC/ATSC/QAM

Tuner)

3x HDMI with HDCP plus Stereo Analog Audio

500

2x Component YPbPr plus Stereo Audio 2x Composite Video plus Stereo Audio

1x S-Video plus Stereo Audio

1x Analog RGB plus Stereo Audio

USB firmware update

Audio Inputs 1x Stereo Audio (RCA)

1x PC mini jack

1x SPDIF Digital Audio (Optical) **Audio Outputs**

1x Stereo Analog Audio

Service Port USB service port

Audio Speaker 10W X 2

Power Input 100~240Vac at 50/60 Hz

Power Consumption Max 178 /Avg. 126 W, Standby < 0.5 W

EDID version VGA - 1.3

HDMI - 1.3

Preset Modes Primary 1920 (H) x 1080 (V) @ 60Hz.

Optical Characteristics RAKEN Panel

Item			Specification			
Supplier	RAKEN		RAKEN			
Panel			LC370WUE_SBA1			
Display Pixels	Display Pixels (H x V)		1920 x 1080			
Active Display Area (H x V, mm)			819.36 (H) x 460.89 (V)			
Color Depth			8bit(D)			
Pixel Pitch (H	x V, mm))	0.42675mm x 0.42675mmxRGB			
Luminance of (Center of Screen	•	-	500			
Contrast Ratio			1400:1			
	White	Х	0.279			
		у	0.292			
Color	Red	Х	0.639			
coordinate	Red	у	0.334			
(typical) ±0.030	Croon	Х	0.289			
	GIEEII	у	0.606			
	Blue	Х	0.145			
	Diue	у	0.065			

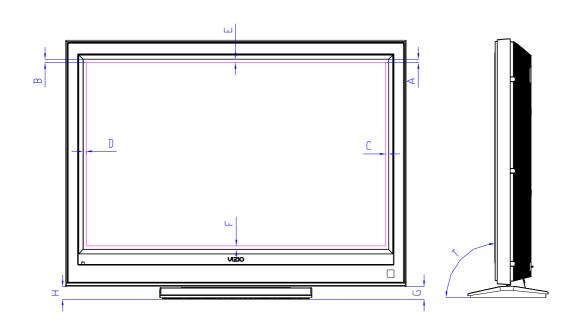
Remark: All characteristics are measured at least 30 minutes later after power-on in the normal ambient temperature

2. POWER SUPPLY

a. Input voltage: 100~240Vac, 50/60Hz
b. Input current: 3A (at AC 90V/60Hz)
c. Inrush current: 100A at Vac=100V

d. Power consumption: 178 W MAX/ 126 W AVGe. Standby / Power off: <0.5 Watts. (at 115 Vac)

Mechanical and Packaging Specifications



MECHANICAL SPECIFICATION

(Unit: mm)

Gap allowance between bezel & panel surface $Gap \le 4.0$

Horizontal Tilt $|A-B| \le NONE$

Panel disposition tolerance C,D,E,F > 0

Product balance $|G-H| \le 5 \text{ mm}$

89°≦T≦91°

Tilt angle up :-2° \sim -5°

Down: 13° ~ 18°

OUTLINE DIMENSION

Physical dimension

(Unit: mm)

	Display Module	Display Module + Base		
Height	603.7	634.3		
Width	919.9	919.9		
Depth	98	218.2		

Weight

a. Net (W/O Base): 12.6 ±1.0kg
 b. Net (W/ Base): 13.1 ±1.0kg
 c. Gross: 17.0±1.0kg

Material, color

Part name	Material	Color		
Front bezel	ABS(94-HB)	Chocolate T52013		
Rear cover	ABS(94-5V)	Black T52013		
Base Ass'y	ABS(94-HB)	Chocolate T52012		

Wall-mounting

a. Screw size: M6* PITCH 1.0 mm

b. Screw Q'ty: 4 pcs

c. Mounting hole pitch: 400 (H), 200 (V) (mm)

PACKAGING SPECIFICATION

Packaged dimensions

a. Height $745.0 \pm 10 \text{ mm}$ b. Width $1060.0 \pm 10 \text{ mm}$ c. Depth $225.0 \pm 10 \text{ mm}$

Pallet Load

a. Sea A)15 units / pallet

b. Air A)NONE

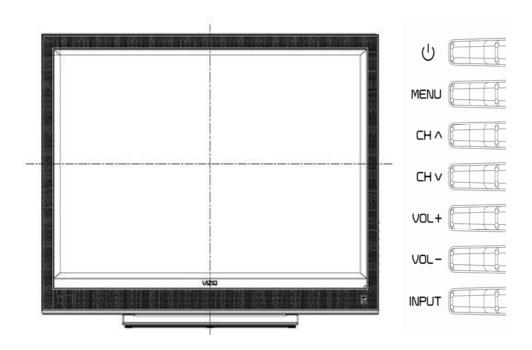
Container Load

a. 40' container 330 units (=15*22 Pallets) b. 20' container 100 units (=10*10 Pallets)

ACCESSORIES

- a. 1.8M HDMI Cable x 1
- b. 1.8M Power Cord 110V UL/CSA Black x 1
- c. VIZIO Universal Remote Control VUR8P x 1
- d. User's Manual x 1
- e. Quick Start Guide x 1*
- f. Registration card x 1
- g. Service Brochure x 1*
- h. AA batteries x 2
- i. D size Polishing Cloth x 1
- j. Safety Strap x 1
- k. Product Warranty & Repair sheet x 1

External Control Panel & Indicators



3. LED INDICATOR DISPLAY ON THE FRONT

LED indicator	Status	Remark
Off	AC power off	By disconnecting the power cord
White	Power on	Becoming dimmer after lighting up a few seconds
Orange	Standby	Becoming dimmer after lighting up a few seconds

4. SPECIFICATION AND EXPLANATION OF USER CONTROL PANEL ON THE SIDE

Buttons	1	2	3	4	5	6	7
Name	(Power symbol))	MENU	CH+	CH-	VOL+	VOL-	INPUT

Standby/Power on

After AC on, by pressing Power button, LED indicator turns to white to indicate power on. To turn off this device, press this button again.

Menu Operation

Press MENU button to activate the OSD. Press this button again to exit.

Channel Selection

By operating the CH+ and CH- buttons, channel should be selected. At the time, channel should increase with CH+ button and decrease with CH- button.

When the "MENU" is activated, it can be navigated up by CH+ button and down by CH- button.

Volume Adjustment

By operating the VOL+ and VOL-/ buttons, volume should be available to change

from minimum to maximum. At the time, volume should increase with VOL+ button

and decrease with VOL- button, and volume shift should be smooth.

When the "MENU" is activated, it can be navigated left by VOL+ button and right by

VOL-button.

Input Change

This button allows the user to cycle through the input sources in the following

sequence: TV, AV1(S-Video), AV2 (Video*), Component 1, Component 2, RGB,

HDMI 1, HDMI 2 and HDMI 3.

5. Speaker

Output $6\Omega/10W$ (max) X2

6. ENVIRONMENT

Operating Temperature: 5°C~35°C (Ambient)

Operating Humidity: Ta= 35 °C, 90%RH (Non-condensing)

Operating Altitude: 0~14,000 feet (Non-Operating)

7. WEIGHT (Physical weight)

Net (Without Base): 12.6 ±1.0kg

Net (With Base):

13.1 ±1.0kg

Gross: 17.0±1.0kg

Chapter 3 On Screen Display

Main unit button

Power \bigcirc

MENU

CH ▲

CH ▼

VOL A

VOL ▼

Input (TV Source on Screen Display)

AV, Component



A. PICTURE ADJUST:

- a. Picture Mode (Custom/Standard/ Movie/Game/Vivid/Football/Golf/Basketb all Baseball)
- b. Backlight (0~100)
- c. Brightness (0~100)
- d. Contrast (0~100)
- e. Color (0~100)
- f. Tint (-32~+32)
- g. Sharpness (0~7)
- h. Advance Video

Noise Reduction/Color

Enhancement/Advanced Adaptive

Luma/Backlight Control/Color

Temperature/Film Mode

i.Rest Picture Mode



B. AUDIO ADJUST:

- a. Audio Mode (Flat/Rock/Pop/Classic/Jazz)
- b.Equalizer (120Hz0/500Hz/1.5KHz/
- 5KHz/10KHz)
- c.Balance(-50~0~50)
- d.SRS TSHD(**On**/OFF)
- e.Digital Audio Out (**PCM**/Off/Dolby Digital)
- f.Speakers(On/Off)
- g.Analog Audio Out (**Fixed**/Variable)
- h.Lip Sync(0~5)
- i.Reset Audio Mode



C. SETUP:

- a. Language(**English**/Espanol /Francais)
- b. Sleep Timer (**OFF**/30MIN/60MIN/90MIN/ 120MIN)
- c. Wide(Zoom1)
- d. Input

Naming(AV1/AV2/Component1/Compone nt2/RGB/HDMI1/HDMI2/HDMI3)

- e. CC (Off/CC1/CC2/CC3/CC4)
- f. Parental(Password)
- g. System Info
- h. System Reset

(Setup Wizard/Reset All Setting)



D. PARENTAL CONTROL:

- a. Channel Block
- b. US TV Rating
- c. US Movie Rating
- d. Canadian English Rating
- e. Canadian French Rating
- f. DTV Rating
- g. Block Unrated TV (No/Yes)
- h. Access Code Edit

HDMI



A. PICTURE ADJUST:

- a. Picture Mode (Custom/Standard/ Movie/Game/Vivid/Football/Golf/Basketb all Baseball)
- b. Backlight (0~100)
- c. Brightness (0~100)
- d. Contrast (0~100)
- e. Color (0~100)
- f. Tint (-32~+32)
- g. Sharpness (0~7)
- h. Advance Video

Noise Reduction/Color
Enhancement/Advanced Adaptive
Luma/Backlight Control/
Color Temperature/Film Mode

i. Rest Picture Mode



B. AUDIO ADJUST:

- a. Audio Mode Flat/Rock/Pop/Classic/Jazz)
- b.Equalizer(120Hz0/500Hz/
 - 1.5KHz/5KHz/10KHz)
- c.Balance(-50~0~50)
- d.SRS TSHD(**On**/OFF)
- e. Digital Audio Out (PCM/Off/Dolby Digital)
- f.Speakers(On/Off)
- g.Analog Audio Out (**Fixed**/Variable)
- h.Lip Sync(0~5)
- i.Reset Audio Mode



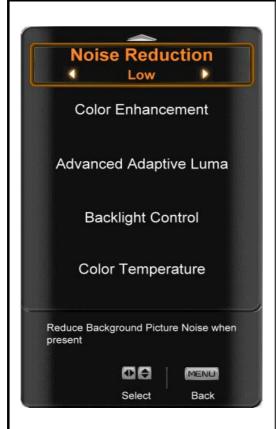
C. SETUP:

- a. Language(English/Espanol /Francais/)
- b. Sleep Timer (**OFF**/30MIN/60MIN/90MIN/ 120MIN)
- c. Wide(Zoom1)
- d. Input

Naming(AV1/AV2/Component1/Compone nt2/RGB/HDMI1/HDMI2/HDMI3)

- e. System Info
- f. System Reset

(Setup Wizard/Reset All Setting)



D. ADVANCED VIDEO:

a. Noise Reduction

(OFF/Low/Medium/Strong)

b. Color

Enhancement(OFF/Normal/Rich Color/(Green/Flesh)/(Green/Blue))

- c. Advance AdaptiveLUMA(OFF/Low/Medium/Strong/Extend)
- d. Backlight Control(OFF/DCR/OPC)
- e. Color Temperature

(Color Temperature

(Color temputer/Normal//Custom)

/Red(0~255)/Green(0~255)/Blue(0~255)

f.Film Mode(Auto/OFF)

RGB MODE



A. PICTURE ADJUST:

- a. Auto Adjust
- b. Backlight (0~100)
- c. Brightness (0~100)
- d. Contrast (0~100)
- e. Color Temperature(Color
 Temperature(9300/6500/CUSTOM)/Red(0~255)/Green(0~255)/Blue(0~255))
- f. H-Size (0~255)
- g. H. Position (0~100)
- h. V. Position (0~100)
- i. Fine Tune (0~31)



B. AUDIO ADJUST:

- a. Audio Mode (Flat/Rock/Pop/Classic/Jazz)
- b. Equalizer(120Hz0/500Hz/1.5KHz/5KHz/1 0KHz)
- c. Balance(-50~0~50)
- d. SRS TSHD(On/Off)
- e. Digital Audio Out (**PCM**/Off/Dolby Digital)
- f. Speakers(On/Off)
- g. Analog Audio Out(**Fixed**/Variable)
- h. Lip Sync(0~5)
- i. Reset Audio Mode



C. SETUP:

- a. Language(English/Espanol /Francais/)
- b. Sleep Timer (**OFF**/30MIN/60MIN/90MIN/ 120MIN)
- c. Wide(Full/Stretch)
- d.Input Naming

(AV1/AV2/Component1/Component2/

RGB/HDMI1/HDMI2/HDMI3)

- e.System Info
- f.System Reset

(Setup Wizard/Reset All Setting)

(1) TV&DTV MODE



- A. PICTURE ADJUST: (ATV & DTV)
 - a. Picture Mode (Custom/Standard/ Movie/Game/Vivid/Football/Golf/Basketb all Baseball)
 - b. Backlight (0~100)
 - c. Brightness (0~100)
 - d. Contrast (0~100)
 - e. Color (0~100)
 - f. Tint (-32~+32)
 - g. Sharpness (0~7)
 - h. Advance Video

Noise Reduction/Color Enhancement/Advanced Adaptive Luma/Backlight Control/ Color Temperature/Film Mode

i. Reset Picture Mode



B. AUDIO ADJUST: (ATV & DTV)

- a. Audio Mode(Flat/Rock/Pop/Classic/Jazz)
- b. Equalizer(120Hz0/500Hz/1.5KHz/5K Hz/10KHz)
- c. Balance(-50~0~50)
- d. SRS TSHD(Off/**On**)
- e. Digital Audio Out (**PCM**/Off/Dolby Digital)
- f. Speakers(On/Off)
- g. Analog Audio Out(**Fixed**/Variable)
- h. Lip Sync(0~5)
- i. Reset Audio Mode



- C. TV: (ATV & DTV)
 - a. Tuner Mode (Cable/Antenna)
 - b. Auto Search
 - c. Partial Channel Search
 - d. Skip Channel
 - e. MTS(Stereo/SAP/Mono) (**ATV**)

 MTS ((1/2 English 5.)/ (2/2 Spanish

st))(DTV)

- f. Time Zone (Eastern/Indiana/Central/ Mountain/Arizona/Newfoundland/Pacific/ Alaska/Hawaii/Atlantic)
- g. Daylight Saving (On/Off)
- h. Channel info



- D. SETUP: (ATV only)
 - a. Language(**English**/Espanol /Francais)
 - b. Sleep Timer (**OFF**/30MIN/60MIN/90MIN/ 120MIN)
 - c. Wide(Normal/Panoramic/Zoom1/Zoom2)
 - d. Input Naming

(AV1/AV2/Component1/Component2/

RGB/HDMI1/HDMI2/HDMI3)

- e. CC (CC/Digital CC Style)
- f. H/V Position(H. Position/V. Position/ H-Size/ V-Size)
- g. Parental
- h. System Info
- i. System Reset

(Setup Wizard/Reset All Setting)



- E. SETUP: (DTV only)
 - a. Language(English/Espanol /Francais/)
 - b. Sleep Timer (**OFF**/30MIN/60MIN/90MIN/ 120MIN)
 - c. Wide(Zoom1/Stretch)
 - d. Input Naming(AV1/AV2/COMPONENT1/CO MPONNT2/RGB/HDMI1/HDMI2)
 - e. CC (CC/Digital CC Style)
 - f. Parental
 - g. System Info
 - h. System Setup(Setup Wizard/Reset All Setting)



F. PARENTAL: (ATV & DTV)

- a. Channel Block
- b. US TV Rating
- c. US Movie Rating
- d. Canadian English Rating
- e. Canadian French Rating
- f. DTV Rating
- g. Block Unrated TV
- h. Access Code Edit



- G. ADVANCED VIDEO: (ATV & DTV)
 - a. Noise Reduction(Off/Low/Medium/Strong)
 - b. Color Enhancement (Off/Normal/Rich Color/(Green/Flesh)/(Green/Blue))
 - c. Advance Adaptive LUMA(Off/Low/**Medium**/Strong/Extend)
 - d. Backlight Control(DCR/OPC/Off)
 - e. Color Temperature(Color Temperature/Red/Green/Blue)
 - f.Film Mode(Auto/Off)



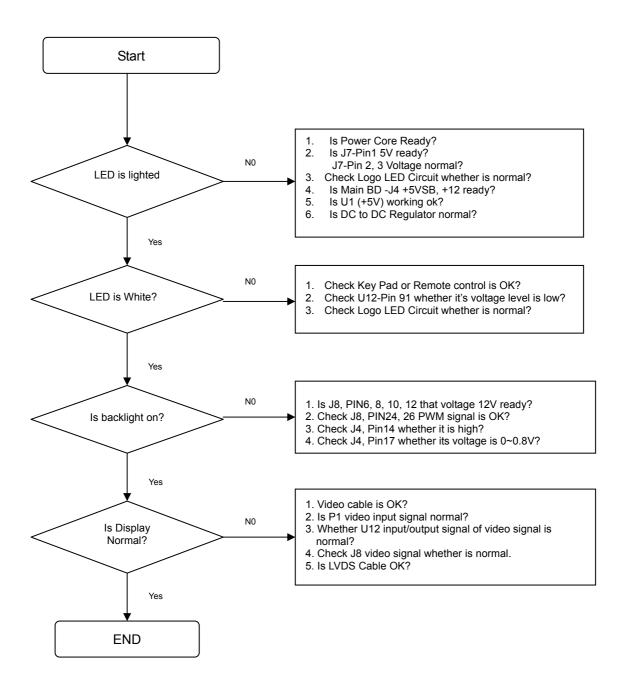
H. CC

- a. CC (Off/CC1/2/3/4/Service1/2/3/4/5/6)
- b. Digital CC Style

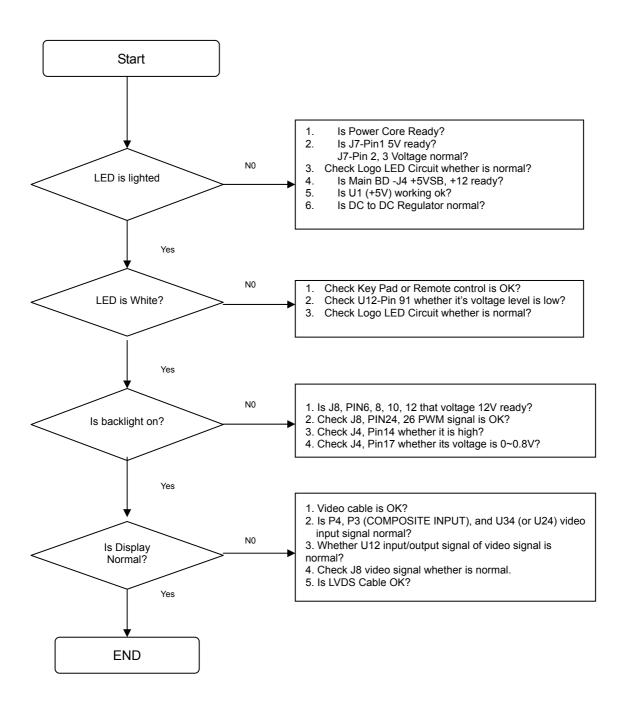
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Chapter 9 Trouble shooting

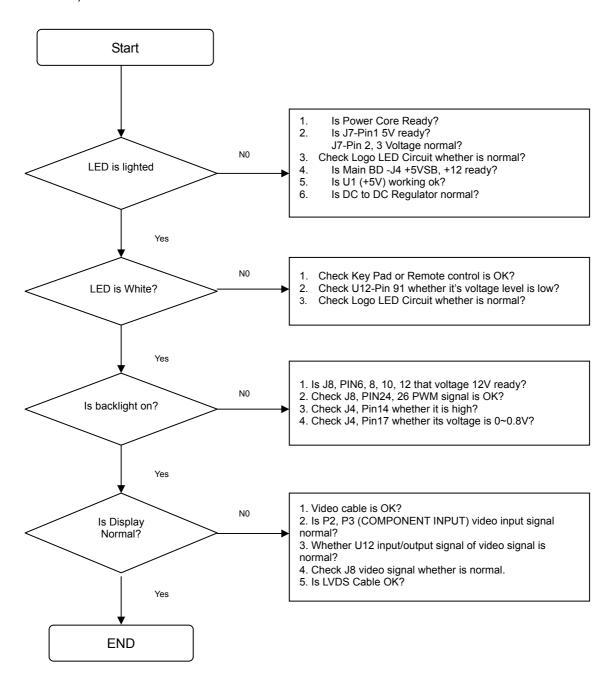
MONITOR DISPLAY NOTHING (PC MODE)



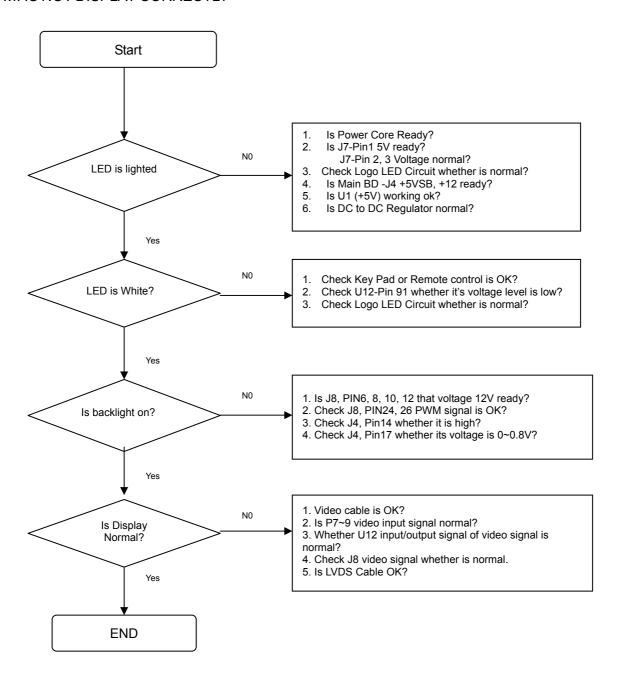
(TV, COMPOSITE, VIDEO) IS NOT DISPLAY CORRECTLY



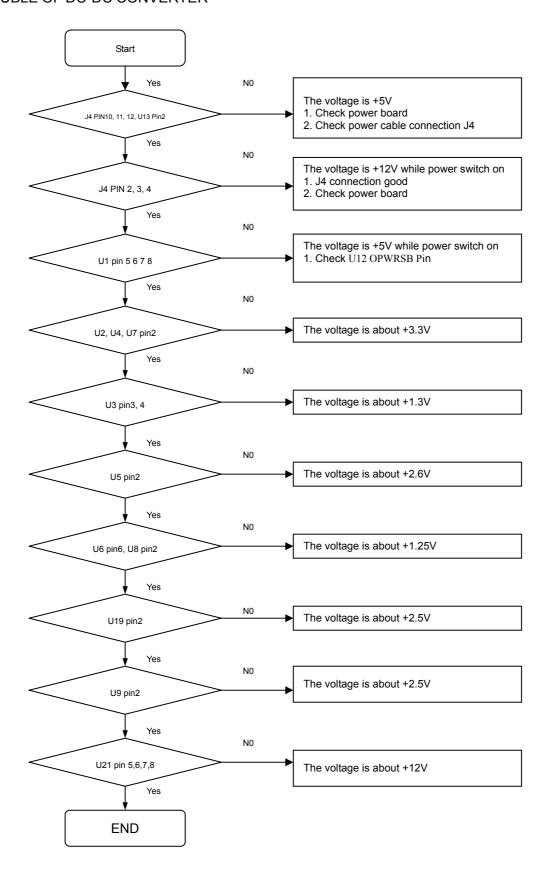
(COMPONENT) IS NOT DISPLAY CORRECTLY



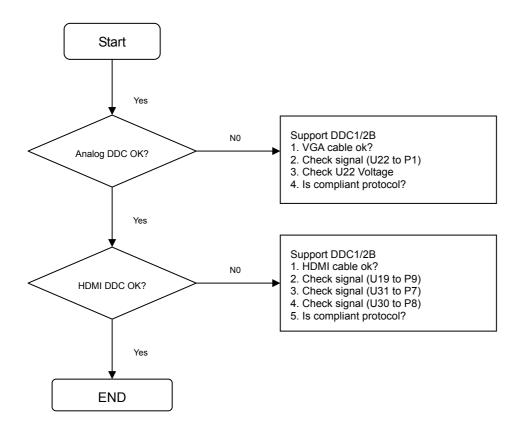
HDMI IS NOT DISPLAY CORRECTLY



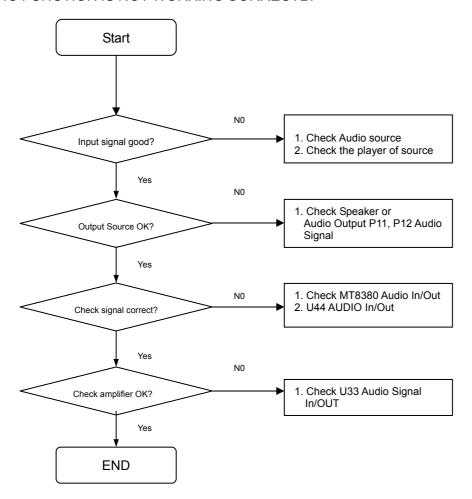
TROUBLE OF DC-DC CONVERTER



TROUBLE OF DDC READING



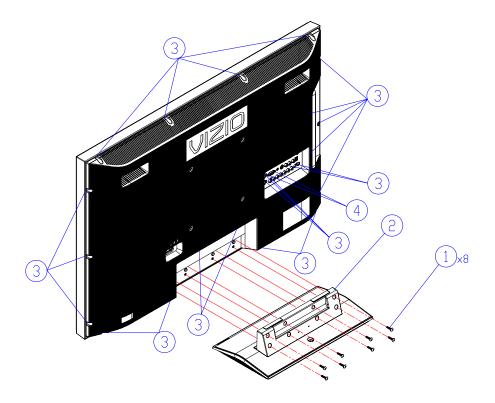
AUDIO FUNCTION IS NOT WORKING CORRECTLY

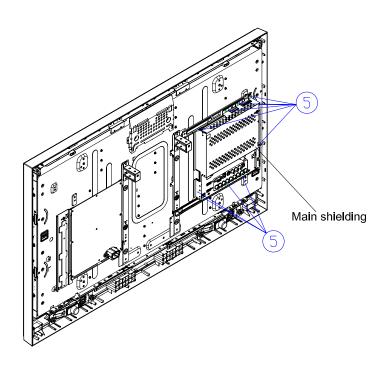


1.REAR COVER ASS'Y /CONNECTOR BD ASS'Y REMOVAL

Note:Spread a mat underneath to avoid damaging the TV surface.

- 1) Remove eight screws ① from Base Ass'y ② .
- 2) Separate the Base Ass'y 2.
- 3) Remove twenty_three ③ and two hexagon screws ④ from rear cover.
- 4) Separate the rear cover.
- 5) Remove ten screws 5 from main shielding.
- 6) Separate the Main shielding.





2. POWER BD ASS'Y REMOVAL

- 1) Remove the connector (6) (CN1) (CN2) of the inverter cable.
- 2) Remove the connector (8) (CN3) (9) (CN4) of the Main cable.
- 3) Remove seven screws no from Power BD ASS'Y .
- 4) Separate the Power BD ASS'Y.

3. MAIN BD ASS'Y REMOVAL

- 1) Remove the connector (1) (J6) of the speaker cable.
- 2) Remove the connector ② (J1) of the Main cable.
- 3) Remove the connector (3) (J7) of the LVDS cable.
- 4) Remove the connector (5) (J3) of the IR cable.
- 5) Remove the connector (4) (J2) of the LED Backlight cable.
- 5) Remove five screws 16.
- 6) Separate the MAIN BD and side shielding.

